

Special Issue

Climate-Adaptive Built Environments: Design Strategies for a Low-Carbon and Resilient Future

Message from the Guest Editors

The Special Issue aims to collect and advance research addressing the connection between architectural innovation, cutting-edge strategies and technologies, and environmental responsibility. Within this framework, Climate-Adaptive Design reframes buildings and infrastructures from static entities into long-lasting, responsive, and low-carbon systems capable of performing under rising temperatures, increasing extreme events, and evolving energy systems.

We welcome original research articles, comprehensive reviews, and case studies that foster an interdisciplinary dialogue towards a low-carbon and climate-resilient future for buildings and infrastructures, with particular attention to:

- Significant reduction of operational emissions through energy efficiency and climate-responsive design strategies
- Minimisation of embodied emissions by low-carbon, durable, and recyclable materials, as well as innovative solutions for carbon capture and CO₂ uptake
- Promotion of circular resource flows aimed at reducing material consumption and waste generation throughout the life cycle

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Deadline for manuscript submissions

31 December 2026



Buildings

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 5.6



mdpi.com/si/274578

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About the Journal

Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.7 days after submission; acceptance to publication is undertaken in 3.5 days (median values for papers published in this journal in the first half of 2026).